

ABSTRACT

Disclosed is a propulsion system for a spacecraft. The propulsion system includes a supply of oxidizer and at least one nozzle. A conduit fluidly couples the supply of oxidizer and the nozzle. The conduit provides a pathway for oxidizer to flow in a downstream direction from the supply of oxidizer toward and into the nozzle. A pressure regulator is coupled to the conduit and is interposed between the supply of oxidizer and the nozzle, wherein the pressure regulator regulates the pressure of oxidizer flowing through the conduit and downstream of the pressure regulator to a pressure at or below the pressure required to maintain the oxidizer in a gas state to ensure that the any oxidizer flowing through the conduit is in a gas state prior to entering the nozzle. The conduit supplies oxidizer from the supply of oxidizer to a hybrid rocket motor.